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ABSTRACT

This bulletin for businesses is a step-by-step guide to planning and implementing an effective job-related employee basic skills program. Part 1 provides general principles to guide the effort. It addresses literacy and basic skills, the importance of context, and changing requirements for literacy. A preview of key program principles concludes this section. Part 2 discusses 12 basic steps to take in deciding on the purpose and content of a basic skills program, implementing it, and assuring it will be effective. Part 3 considers some special issues, including scheduling classes, when a general literacy program is appropriate, the role of volunteers, limited English speaking employees, small businesses, very big businesses, the role of unions, computers, setting realistic expectations, and whether a business should start with a pilot program. Fourteen illustrative cases are provided throughout the guide. Appendixes include contacts for advice and referral with area(s) of expertise indicated, a list of background reading, and an exemplary model. (YLB)

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Bulletin

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June 1987

Issue No. 2

JOB-RELATED BASIC SKILLS

A Guide For Planners Of Employee Programs

Awareness of the nation's adult illiteracy problem has grown substantially in the last three years as literacy groups, broadcasters, and others have joined forces to bring the matter to public attention. Concrete action to address the problem is also growing, at all levels of society, and throughout the public and private sectors.

The business community has begun to take an active role in many ways: by joining state and local planning activities...speaking out in public forums...giving grants and in-kind help to literacy planning and providing groups...pressing for more public leadership and funding...and offering basic skills services to their own employees.

Illiteracy in the workplace, one aspect of the overall problem, has become a main focus of national attention, bearing as it does on American productivity and competitiveness. Businesses see increasingly that many of their employees have poor basic skills and that there is a direct link between this educational deficiency and on-the-job functioning. Many have set up programs to address this problem. Others are trying to do so now and have been asking for advice on how to get started. This Bulletin aims to help meet that need. It provides information of immediate practical use to businesses large and small. It is a step-by-step guide to planning and implementing an effective job-related employee basic skills program. While designed mainly for companies just getting started, established programs may also find it useful.

The information in this guide came from many sources. BCEL drew on its files, recent research reports, meetings and workshops, and site visits. The staff consulted with dozens of union officials, business leaders, and literacy professionals. More than 80 companies, unions, and national and state business and education organizations provided information about their activities. Many of our professional advisors and numerous business and government representatives reviewed the final draft, shared their special insights, and gave detailed advice on the content. Some contributed to the writing. BCEL is grateful for their interest and support. We are also indebted to the persons who agreed to be included as resource contacts in section A.1 of the guide. And we wish to thank Consultant Dianne Kangisser who gathered and assessed much of the information and prepared the first working draft.

This Bulletin consists of 3 major sections and two appendices:

PART 1: GENERAL PRINCIPLES TO GUIDE YOUR EFFORT (pp. 3-6)

PART 2: DEVELOPING AND OPERATING A PROGRAM (pp. 7-20)

PART 3: SPECIAL ISSUES TO CONSIDER (pp. 21-29)

APPENDIX A: CONTACTS & BACKGROUND READING (pp. 30-40)

APPENDIX B: AN EXEMPLARY MODEL: CONTROL DATA (pp. 41-44)

Before using this guide, a few notes of explanation may be helpful.

First, while the principles and steps discussed apply to all companies and businesses, very small businesses (such as the local doughnut shop) and very large companies (such as the auto manufacturers) are special cases. They may have too few or too many resources to directly take every step recommended. Both cases are discussed in Part 3 of the Bulletin.

Second, this Bulletin focuses on how to develop an effective job-related basic skills program because that is where the need appears to be greatest. But general employee literacy programs also have merit in many working environments. Whether a company should offer a more general program, instead of or as a supplement to a job-related program, is a matter to consider when assessing company and employee needs. General literacy programming is discussed briefly in Part 3.

Third, the subject treated in this Bulletin is complex. And the field, both in and out of the workplace, is presently in a state of flux. Yet to give advice of immediate practical use, many points have necessarily been simplified or touched on only in passing. Thus, this guide is not meant to be the final word, but to provide a starting point. The more companies can talk with others and the more background reading they can do for themselves, the better. Appendix A is included to assist that process.

Fourth, for more information about any topic covered, the resource persons and organizations listed in Appendix A can be called on. Areas of expertise are indicated for each. For each program offered as an illustrative example in the main text, one or more contact persons are included.

PART 1: GENERAL PRINCIPLES TO GUIDE YOUR EFFORT

- 1.1 Introduction (p. 3)
- 1.2 Literacy and Basic Skills (p. 3)
- 1.3 The Importance of Context (p. 4)
- 1.4 Changing Requirements for Literacy (p. 4)
- 1.5 Preview of Key Program Principles (p. 5)

1.1 Introduction

There is no single standard for defining literacy, but it is important to be aware of the two major definitions in use today. For decades, school grade-level completion was most commonly used to define minimum adult literacy levels. Using this measure, the U.S. Department of Education estimated in the late 60's that some 60 million adults were in need of adult basic education, many at the lowest level of skills. The federal Adult Basic Education program was directed at this target group for many years.

It gradually became clear that there is no one-to-one correspondence between grade-level completion and grade-level reading equivalency. It also became apparent that program ineffectiveness and retention problems were due in part to a failure to understand the special circumstances and motivational needs of educationally-disadvantaged adult learners. In an effort to produce a more workable definition of literacy and levels of illiteracy, and to support the design of better programs, the Department of Education funded the Adult Performance Level Study (APL) at the University of Texas. APL identified 65 basic tasks of everyday living and working--filling out a job application, reading a product or medicine bottle label, writing a letter or check, reading a simple manual. In a national sampling it tested the ability of adults to perform or "function" in these tasks. Using data gathered in 1970-72, APL reported in 1974 that 23 million adults were unable to carry out even the simplest tasks (they were "functionally illiterate") for lack of adequate reading and writing skills. More than 40 million others were found to be in need of some help with their basic skills.

A major contribution of APL was that it helped to establish the importance of "context" in defining literacy and literacy levels. Put another way, grade-level equivalencies, standardized tests (when misused), and school-based notions about what adults need to know and how they should be taught are an inadequate, sometimes improper, basis for determining adult literacy levels and achievement and for designing curricular materials and teaching approaches.

The APL Study and research since then make it clear that certain basic principles should guide the design of any basic skills program for low-literate adults, whether the program is general in nature or specifically job-related.

1.2 Literacy and Basic Skills

By the strictest dictionary definition, literacy is the ability to read and write. But the term "literacy" commonly is used interchangeably with the term "basic skills." In general, the basic skills include reading, writing, arithmetical

computation, ability to speak English, and oral communication. How much basic skills proficiency individuals should have to be considered "literate" depends on the social requirements for literacy in particular cultures at particular times. [Note: This Bulletin, as a matter of convenience, speaks of the basic skills largely in terms of reading and writing.]

1.3 The Importance of Context

An understanding of context is vital to the success of any basic skills program. The content and form of instructional materials, and the instructional approach of teachers, must vary depending on what individual adult learners regard as important to the conduct of their own lives.

In general literacy programs, the overall environment, culture, and circumstances in which people live, and the needs they have, must be taken into account in deciding what the purpose of instruction is, which skills to teach, and how to teach. Programs based on externally-imposed assumptions about what low-literate persons should know have generally not worked. Adults must see immediate practical value in the instruction if they are to be attracted to programs, retained in them, and eventually enabled to "do" something they want and need to do in their lives and on the job.

In job-related basic skills training, the individual's self-perceived need and the external requirements of his or her employer are very likely to converge. This is a big plus from the company's point of view because both employee and employer are likely to have the same goal in mind: to improve job performance and/or mobility. Similarly, the CONTEXT for deciding content and program approach is likely to be determined by the requirements of specific jobs, though these will differ greatly from job to job within the same company and from company to company.

As noted above, a company can elect to provide general literacy services to employees--e.g. basic skills as one element of a high-school-equivalency program. But job-related basic skills training is probably more needed in most work settings. And it is more likely to produce concrete results for both you and your employees. [Note: Research indicates that basic skills acquired for one specific job are not directly transferable to other jobs. But job-specific literacy training is generalizable in the sense that it will produce some skills improvement in other job-related areas and in an employee's general functioning.]

1.4 Changing Requirements for Literacy

Definitions of and standards for literacy are not fixed. The requirements for literacy were lower only a few decades ago than they are now. As society and the workplace continue to change, so will the standards and requirements for literacy. Nevertheless, research confirms that:

- . Reading on a daily basis is now a requirement of almost every job.
- . Most jobs require higher reading levels for problem-solving than ever before. A major 1984 study of occupational settings (by Larry Mikulecky of Indiana University) found that 70 percent of the reading material in a cross section of jobs is between 9th and 12th grade level in difficulty, and that 15 percent is above that.

- . Workers today must confront a wide range of reading material. Lengthy handbooks, memoranda, procedural checklists, and written materials are often accompanied by graphs, tables, charts, and numbers. Advances in technology increase the need for employees to produce and comprehend written material. Thus many employees who possess the rudiments of basic skills need retraining because they are not fluent readers and usually lack an adequate knowledge base. [Note: Some background knowledge of ideas, experiences, and vocabulary is necessary before an employee can understand printed material dealing with unfamiliar concepts.]

1.5 Preview of Key Program Principles

- . Teach basic skills using the content of specific jobs (the context).
- . Teach reading strategies that are appropriate to workplace needs. Employees need to read to accomplish specific tasks, make judgments, and solve problems. Specific reading strategies enable them to do these things.
- . Build on the employee's prior knowledge of a job content area to teach new concepts.
- . Customize the curriculum to suit the needs of your company and the specific jobs that must be done. Total reliance on commercially-prepared materials or materials developed elsewhere seldom will be suitable.
- . Use materials actually used on the job for instruction. This helps employees to understand what the job actually consists of and what the performance requirements really are.
- . State learning objectives clearly and explicitly as they relate to skills needed for job performance. Objectives that use non-job criteria, such as reading grade level, are not relevant and their value won't be apparent to the employee.

Illustrative Case 1

Many of the principles given above are illustrated by researcher Larry Mikulecky of Indiana University in his recent study of *An Urban Retraining Program for Wastewater Treatment Workers*:

A group of wastewater treatment workers was transferred to a new plant and had to be trained to meet performance standards imposed by the technical innovations there. The employees had to learn new processes, new equipment, and new safety precautions. The initial program design was patterned after the school model--intensive lecture instruction and heavy reading of textbooks and manuals containing graphs, charts, and diagrams. The trainers soon discovered that the level of basic skills and technical knowledge needed to handle the material was way beyond many of the trainees, who were found to be low-level readers lacking adequate background knowledge of the content area. The municipality solved the problem by hiring a reading specialist to:

- . help workers cope with anxieties brought on by previous negative experiences with school and fear of failure;
- . develop a suitable basic skills component for the low-level readers (i.e. rewriting course materials to lower levels of difficulty, developing special study guides to better pace learning and instruction, discussing content orally, and giving special attention to how graphs and diagrams should be interpreted); and
- . teach other trainers how to work with the lower-level trainees.

The subsequent program, which consisted of 10 two-week modules (two weeks in class and two weeks in on-the-job training), produced excellent results. Nearly half of the trainees who worked with the reading specialist passed the technical skills post-test, though only five percent were expected to before the special basic skills component was added. Moreover, the retention rate for these employees was higher than for those without special instruction even though the latter had higher skills at the start. It is noteworthy that the basic skills component was set within the framework of the employer's regular training program, not designed in isolation from it.

PART 2: DEVELOPING AND OPERATING A PROGRAM

This section of the Bulletin discusses the basic steps to take in deciding on the purpose and content of a basic skills program, implementing it, and assuring that it will be effective.

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- 2.2 Creating a Planning Team (p. 9)
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- 2.4 Establishing Program Goals (p. 12)
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2.1 Assessing Your Company's Resources & Needs

Before setting up an employee basic skills program, an internal assessment of resources and needs will be necessary. This will help ensure that the program you implement is appropriate to your particular circumstances and overall company goals. Human, financial, and physical resources will have to be allocated to the program and a clear understanding of the extent and nature of the resources available will help you determine what kind of program to offer. The following questions can serve as a guide:

- . What goals/standards of your company are not being met?
- . What changes are expected in the workplace affecting future goals and standards?
- . What skills are/will be required to perform particular jobs?
(Answers to this question will provide the basis for identifying the training needs of your workforce.)
- . Do enough employees need help to warrant establishing a program?
- . What departments in your company will have to be involved--training? personnel? public relations?--and how will their activities be coordinated?
- . Is your company prepared to assign staff that will be needed to direct, coordinate, and monitor the program?
- . Do you have appropriate space available to accommodate an on-site program?
- . Will employees be given full or partial released time to study basic skills and how will this affect the worksite and productivity?
- . What will it cost to plan and manage a program and how much of the cost is your company willing or able to assume?

Illustrative Case 2: The Onan Corporation

Before Onan switched to an automated production process, most of its jobs required only limited reading and math skills. Afterwards, technical training was needed to enable employees to operate the new machinery. Onan found it necessary to provide basic skills instruction to many of the employees before they could succeed in the technical training courses.

In 1982 the company hired a study team from the University of Minnesota to assess the skills of their 600 production workers. Different levels of management were interviewed to find out how they perceived present and future employee needs, and a questionnaire was administered to small groups of employees to determine what basic skills courses they had taken before, how successful they were, and what areas they needed help with currently.

Onan's director of training and development at the time discovered that management had overestimated the math skill level of the employees--43 percent of whom asked for help in this area. Moreover, although math was the chief concern of management, and 98 percent of Onan's employees had high school diplomas, it was found that five percent of the group to whom the questionnaire was given could not read it well enough to answer the questions.

It cost Onan several thousand dollars to pull employees off the job to give the questionnaire, but the step was considered a necessary and worthwhile investment. The needs assessment turned out to be the backbone of Onan's training/retraining program and was seen by top management as critical to the planning process. Staff then planned a curriculum based on the interviews and questionnaire findings. The end goal was to enable the employees to master the new production process through technical training, and the remedial work in basic skills was a necessary intermediate step.

Job analysis should be an integral part of the internal needs assessment. It will provide vital information about how much and what kind of instruction is really necessary to meet the performance requirements of particular jobs. The objective is to determine what skills and information employees need to perform well in their jobs. Experts advise establishing the minimum basic skills competencies required for each job or group of jobs in the company depending on which is most feasible. To do this effectively, you can either bring in an outside expert or consult with a company that already has been through the job analysis process, or a combination of both. You may also wish to do an analysis of job paths that are likely to be open to your employees. The possibility of greater job mobility and promotability is often a strong incentive for them to attend a job-related skills program.

Illustrative Case 3: Polaroid Corporation

Polaroid probably has the oldest, most comprehensive, and most thoroughly validated company-operated program in the country. (Some 50 percent of Polaroid's education and training budget is devoted to entry-level and hourly workers, and basic skills provision is a major area of focus.) A two-pronged approach is used to yield job analysis information. First a Team Inventory is conducted. A group of employees who are familiar with jobs in the company--including supervisors, hourly workers, managers, and personnel and training people--figure out the specific tasks performed in each job and the minimum level of basic skills needed to get the jobs done. A Technical Assistance Study is then carried out to analyze the reading,

writing, and math materials used in each job, set of jobs, or operation within a job. A decision is then made as to which skills should be the immediate company priority and which group of employees should be taught first.

Supervisors can play a key role in assessing employee basic skills needs. They work closest with many of your workers and may be most aware of those needing help. They may have had to make up for staff deficiencies by rewriting reports or otherwise compensating for detected reading and writing problems. Many will be aware of certain behaviors that indicate a basic skills problem. And apart from what they can contribute to the overall assessment activity, the act of involving them will also strengthen their own sensitivity to staff functioning and need.

2.2 Creating A Planning Team

It is possible for a single staff member to plan and carry out an employee basic skills program. But better results are usually achieved by a representative company-wide planning team. This may lengthen the planning process but it will pay off in the long run with a stronger program and one that is more firmly integrated into your company's overall training and education effort. It also will make it easier to gain employee acceptance of and participation in the program. Who the specific representatives should be will vary from company to company. But in general it will be important to include training personnel, human resource personnel, department heads directly affected by the program, plant managers, union representatives, employees themselves, and perhaps the company librarian.

In cases where full representation results in a planning team that is too large to work well, subcommittees can be formed to explore specific areas of concern and develop recommendations. While executive management need not be actively involved in the team's work, strong and visible support from them is essential and should be evident to the group when it first meets. Moreover, for the team to be truly productive it should be vested by top management with the authority to do a thorough job and to take the time needed to achieve its purposes.

2.3 Collaboration: Selecting An Educational Partner

If your internal assessment indicates the need for a job-related basic skills program, you have two choices. You can either operate the total program yourself or contract with an educational service provider. Most companies do not have the internal resources necessary to develop and run their own program. They will be well advised to seek outside help in the hiring of needed staff, developing an actual curriculum and teaching approach, selecting materials appropriate to the program goals, evaluating the program's effectiveness, and operating the program.

In most communities throughout the country there are educational provider organizations from which you can select the one best suited to your needs. Generally, these are:

- . Your local school district, which may administer an adult basic education program.
- . The adult and continuing education unit of your state education department.
- . Colleges and universities in your area, many of which operate adult basic education programs, some having special expertise in job-related skills programs.
- . Nonprofit literacy groups. Laubach Literacy and Literacy Volunteers of America are the two major voluntary organizations. Both have state and local affiliate operations around the country. These affiliate units recruit, train, and support volunteer tutors who give one-to-one and small group instruction in various settings. Community-based organizations (CBO's) are another potential source of help. These highly localized entities operate under various names and can best be found by contacting state or local literacy planning bodies or the Association for Community Based Education in Washington, D.C. CBO's have an especially good track record with adults at the lowest educational level.
- . For-profit organizations and individuals. Many have or are developing services to help with job-related basic skills training. BCEL can provide some leads in this area. Those charged with statewide planning in your state should be able to help as well.
- . Private Industry Councils. PICs are actively involved in this area in many states and localities. Many use funds from the Job Training Partnership Act to develop cooperative job-related basic skills programs.
- . Your local library and/or State Library Office.

In exploring the options for partnership, it should be kept in mind that not all providers will be equally suitable for your purposes. Collaboration between companies and education providers for basic skills programming is a relatively new phenomenon. Many education experts still lack specific knowledge about how to develop a job-related curriculum and teach it in a company setting. Moreover, you and your partner may not speak the same language initially. Adaptability on both sides will be required if the working relationship is to pay off. So you will need to examine the possibilities with great care and have a clear sense ahead of time about what you are looking for. Your choice of a provider is probably the most important single decision you will make. The following questions can serve as a guide as you consider various organizations:

- . What kind of past experience have they had in working in an industrial or business setting?
- . Do they specialize in developing programs for particular population groups (e.g. immigrants, older workers, laid-off workers) and is there evidence that they are equipped to deal with the needy groups in your workforce?
- . Will they agree to a pilot project at first if you want that?
- . What is their philosophy of adult education, and is it compatible with your own?

- . What are the main elements of their overall proposed program and what will each element cost? (Some potential partners, e.g. school district programs, can assume at least part of the cost. If your company has very limited resources this could be a major factor in your choice of a partner as well as the type of program you adopt.)
- . What specifically will they do to help you assess the skills training needs of your employees, and what kind of program would they design to meet those needs?
- . What specifically will they do to customize the curriculum to your particular job and employee requirements?
- . How will they evaluate the program?
- . What specifically do they see as their responsibilities, and what do they see as yours?
- . What help will they need from you and others in your company?
- . Who will be their key liaison to your company, and how will that person work with your staff?
- . How will instructors be selected and trained? How and by whom will they be supervised? What kind of staff development can they provide?
- . How many hours of instruction will be given and how long will a cycle of classes run?
- . Are you satisfied that they can realistically accomplish what you want done and what they say they can do? In what time frame? And what will your employees be able to "do" when they have finished their basic skills training?

Illustrative Case 4: Planter's Peanuts

Planter's Peanuts operates a basic skills program for its hourly workers in collaboration with the Suffolk Public Schools in Virginia and Local 26 of the United Auto Workers. A good number of Planter's 800 employees are from rural areas, had little or no schooling when they started at the company in unskilled jobs, and now lack the reading, writing, and math skills needed to handle newly-mechanized equipment. The School District obtained a grant and technical assistance from the Virginia State Department of Education to pilot this program nine years ago. Suffolk and Planter's now split the cost. The program operates Monday to Thursday from 1:00 to 6:00 p.m. to accommodate employees in each of the three work shifts. Participants must attend class on their own time, either before or after work, and they must attend a minimum of four hours a week in order to be compensated for two hours of their time.

Illustrative Case 5: GRASP Adult Learning Center

Carmen's Pizzeria is typical of the small businesses served by the 12-year-old GRASP Adult Learning Center in Illinois. Started with federal funding, now sustained by state and local funds, GRASP offers basic skills, English as a Second Language, and high-school-equivalency courses, working under contract with small

businesses in the Chicago area (the majority of which need ESL instruction for their employees). The curriculum is customized to each particular job setting. The charge to the business is \$35 per employee for the first 10-week course and \$40 per hour for each 10-week course thereafter. Carmen's 20 employees are from Mexico and South America and have little or no English proficiency. A GRASP teacher arrives at the restaurant four days a week and works with the employees on their language skills from 2:00 to 4:00 p.m. The owner of the pizzeria is convinced that the program cost is a small price to pay for cooks that can better understand special orders, waitresses who communicate better with the public, and increased confidence and morale among all the staff. Attendance is reportedly 100 percent and employees even come on their days off.

Illustrative Case 6: The HRD Department, Inc.

The HRD Department, Inc., a private consulting firm in Minnesota, works with several area businesses to develop job-related basic skills programs. HRD did the job analysis and curriculum development for the Onan Corporation. It also determined teacher qualifications, helped train and orient the instructors, developed program promotional strategies, and, initially, oversaw day-to-day administration. The primary advantage to Onan in this partnership was the special knowledge that HRD brought to the effort because of its experience with industrial job training programs. HRD was quick to understand Onan's needs because of its familiarity with the language, systems, and technologies of business.

There are many variations on the three models of collaboration given above. Some, including GRASP, use volunteers to help employees with non-employment tasks such as getting a driver's license or acquiring citizenship. An official of the Gary Works Jobs Search Center in Indiana specializes in programs for laid-off and terminated workers. He has contracted with the local school district to provide basic skills instruction for low-level readers in U.S. Steel's Dislocated Workers Program. At Newport News Shipyards, training staff is collaborating with the Newport News School District which has provided two consultants to help the company set up a pilot basic skills program this year.

2.4 Establishing Program Goals

With your internal needs assessment completed, you will have a clearer idea of what the company needs to accomplish with its program. You should now translate your findings and conclusions into clear and concise program goals in three broad areas: program operation, instructional outcomes, and product outcomes. Operational goals relate to matters of program administration--e.g. recruiting and orienting employees, keeping records, specifying when and where classes will meet. Instructional goals relate to the teaching and learning process--what will be taught, how, and why. A specific goal might be for one or more employees to write a work change order that can be understood by co-workers. A desired product outcome might be to rewrite a technical manual in simpler language.

Your outside educational provider will probably have to be centrally involved in helping you to specify instructional and product goals, all of which should be based on the company's current needs and then periodically revised as your needs change.

In addition to formulating the precise program goals and tasks to be performed, it will help at this point to assign clear responsibility for each task to the appropriate member of your team or outside partner. Hiring and supervising the teaching staff might be assigned to the outside educational partner. Company management normally would be expected to produce suitable classroom space. And the job of ongoing promotion and publicity might best be done by the union or your human resources department. The more specific you can be in stating program goals and expected outcomes, and the clearer everyone is about who is responsible for what, the better foundation you will have for implementing a program that will succeed and that later can be evaluated.

2.5 Staffing

Project Coordinator. The employee designated to serve as company coordinator of your training program has a pivotal role to play and should be selected with care. This individual will be the company's main liaison with your chosen educational partner. He or she will need good communication and organizational skills in order to build necessary collaboration among members of the company planning team, the union, and other company personnel who may need to be involved. A main responsibility of the coordinator will be to interpret company policies and procedures to your educational partner and to provide any information needed to support the development of good instruction.

How responsibilities are shared among the provider, concerned individuals and departments in your company, and the project coordinator will depend to some extent on the qualifications of the coordinator. If your candidate has a strong background in education and training, the planning team may well serve in an advisory capacity to both the coordinator and outside partner. But in a smaller company with fewer resources, the coordinator may wear several hats and have less time and inclination to assume the dominant role. If that is the case in your company, the planning team and the educational partner will need to assume a more active role in the program's operation. Either way, it will be important for the coordinator to monitor both the program and the provider group's performance. At the very least this person will regularly need to observe instruction, meet with the provider and program director, and talk with employees about their progress and problems.

Program Director. The instructional program will need a director. This person would usually be assigned from the staff of the educational providing organization, and may either maintain an office on company premises or come in for regular site visits.

The director should be experienced in implementing and managing a basic skills program. This includes curriculum and materials development, teacher training and supervision, learner assessment, and record keeping.

The earlier the director can be brought into the program development process the better because the individual will have to work closely with planning team members and the internal project coordinator. You will have to give this person a detailed introduction to training/education programs already in place as well as to the company's history, policies, procedures, and work schedules. Information about in-service training conducted by your personnel or training departments should be included in the orientation so that the director has a complete picture of your operations, resources, and likely target areas for basic skills instruction.

Teachers. One of the main reasons for working with an outside educational provider is that they are in the best position to provide the teaching staff. To assure that you get teachers really suited to the needs of both your company and your employees, you should be involved in a general way in their selection. You also will need to be sure that appropriate internal mechanisms are in place to support and monitor their work.

The teachers should be knowledgeable about and sensitive to adult learners and their needs. They should have prior experience in teaching basic skills to adults. They should be comfortable with curriculum and instructional approaches that are not school-based. They should be flexible and open to cooperation with company personnel and to experimentation with a range of teaching approaches and job-related materials. They also should be experienced in basic skills instruction that is specifically job-related. With these criteria satisfied, additional training may be needed to enable them to function well in your particular company setting. Strong supervision will be essential.

Finally, as with the director, instructors should be brought into the program planning and development process early on. They will need to be oriented to the company and have the cooperation of all company personnel involved. While they may technically be employees of your educational partner, they will operate more or less on their own in your program. So it will be important for you to give them visible support and to integrate them as quickly as possible into the company's operations.

2.6 Curriculum, Teaching Approaches, Materials

There is a solid body of research to show that adults learn in many different ways. Research also indicates that no single teaching method is appropriate to all learners (whether children or adults). Thus, your basic skills program will get better results if a variety of learning styles can be accommodated. You will need instructors who can adapt their teaching approaches to the needs of individual employees. Instructional modes derived from technical/managerial training or from traditional school concepts seldom will work well. If employees most in need of basic skills help are asked to read dense texts, listen to lectures, and take notes in order to get through their program, they will not get far. They may have been out of school for years or decades. Hence their reading, writing, math, and "school" skills may be very rusty or nonexistent. And many may have dropped out of school precisely because they were unable to learn there. Thus, an instructional approach that treats them like children won't hold their interest very long and meeting the goals of your program will be difficult if not impossible. One very important point to keep in mind is that it is best to measure the success of your program by the employee's subsequent ability to apply what he or she has learned to the requirements of a job actually performed. Pen-and-pencil tests to show concept knowledge and skill attainment will not be appropriate.

Illustrative Case 7: Joseph Bulova School

The Joseph Bulova School in New York City trains students in jewelry repair, digital electronics, computer repair, and watch repair, using a pragmatic, non-school approach. The training manual for the watch repair course is written at high-school level, even though the entrance requirement for trainees is set minimally at third-grade level. A recent study of the trainees found that nearly half read below high-school level, and that a third had a very low skills level. Despite their reading deficiencies, the trainees succeeded in their course. Their success was attributed to the way the instruction is geared. It was found that the lower-

skilled readers used the written manual less than their more reading-proficient counterparts, though none read the entire manual. They were able to obtain the knowledge they needed in other ways: by working back and forth between the course and their jobs so that what they were doing on the job helped them better understand the course material; and by acquiring needed information from "social sources," in this case the instructor and the higher-level readers in the program.

Illustrative Case 8: Center for Employment Training

The Center for Employment Training (CET), a community-based organization established in 1967, operates in 30 communities in 7 Western states. CET offers basic skills training to an under-educated, often poor, largely Hispanic population in such areas as electronics, auto mechanics, and word processing. Their trainees are people who have been phased out of manual labor jobs and need higher literacy levels to qualify for jobs in the service field.

As part of a national project, the Rockefeller Foundation funded the Institute for Literacy Studies at New York's Lehman College to develop with CET teachers methods for integrating basic skills instruction with job training. Vocational and adult basic education teachers took part in a series of workshops to this end. The Institute found that reading and writing were being used in school-related ways in CET's technical classes (following instructions, testing memory and understanding), or that reading materials such as technical manuals were being given to trainees with little attention paid to strategies needed for reading them. They sought to expand and broaden the uses to which reading and writing were put in order to improve both the technical and basic skills learning. Teachers are presently trying out a variety of techniques. Vocational and ABE instructors work as a team in some classes, instead of in isolation, which is more common. Basic skills teachers give reading and writing help to the trainees as it relates to the particular jobs for which they are being prepared. The project is currently being evaluated, but there has been positive feedback already from the instructors. One reported that productivity improved in her word processing class when trainees wrote down weekly and daily goals. A welding instructor found that when trainees kept journals describing what they learned, it not only helped them learn the technical material but enabled him to work with them more effectively.

Whatever instructional methods are chosen for your program, a few basic principles should be observed:

- Employees' prior knowledge about a job content area should be acknowledged and built upon in designing teaching materials and approaches. Acquiring literacy skills involves more than the mechanical decoding of words. Your employees must be able to see an immediate connection between what they already know about their jobs and the written material that is used to teach them. A skilled teacher will elicit students' prior knowledge of a subject area and incorporate that into the teaching approach and the instructional materials used. In this manner the foundation will be put in place to enable the learners to handle material which contains new concepts. If employees on a certain job are expected to read graphs, for example, the teacher should talk with them to find out what they already know about graphs in general as well as about graphs in their own jobs. The teacher might then demonstrate new concepts about graphs by actually drawing one as information about them is presented. The employees can later be taught how to make graphs from print information they must use on the job, and be given ample opportunity to practice this task.

- Materials actually used in specific jobs should be used extensively as instructional resources. The more experience employees have with these materials the more proficient they will become in using them. If the materials are too dense or too long, they can be rewritten and/or broken into smaller chunks. If an employee is expected to read work-change orders as part of his or her job, that material should be used. If an employee must compose memos on the job, have the person actually practice writing memos. General reading texts and traditional writing lessons such as workbook exercises or composition assignments are not appropriate for job-specific training, and your employees will not see them as relevant to the task at hand.
- Trainees should spend time actually reading and writing about the content area they are studying. In many programs, employees spend most of their time with skills workbooks or their equivalent on computers. They often are not asked to read or write even a whole sentence let alone a whole piece. Experts concur that filling in letters on a worksheet or memorizing individual sounds or letters is not enough if done in isolation from actual reading and writing tasks. However, employees can learn and practice necessary skills in context by working from job-related materials. If they are reading an information manual on a piece of equipment they must operate, they can select vocabulary from the manual and use those words as they practice writing instructions on how to operate the equipment.
- Teachers should be creative in how they present information about a content area, especially to less proficient readers. Visual aids may be used, special demonstrations given, and textual material rewritten. Both higher- and low-level readers might be encouraged to work together in a group to provide the reinforcement of peer support.
- Teach reading strategies appropriate to varied on-the-job reading tasks. Different skills are required for different kinds of reading. Junk mail is read differently than a love letter, a contract differently than a comic strip. The same is true in the workplace. Employees will need to be taught which reading strategies are used for which purposes. For example, employees who need to know how to replace a certain machine part do not have to read an entire instruction manual to find out. They do have to learn how to use an index, locate the relevant section in the manual, and find the exact piece of information needed to replace the part. Once the instructions are at hand, however, a different reading strategy is needed to actually process the information presented. They will have to read carefully and slowly, following instructions step by step. A different rate of reading and different skills are involved in performing that task.

[Note: Many companies are concerned about the lack of critical-thinking skills among their employees. These higher-level abilities include problem solving, applying known information to new situations, making sound judgments, and reasoning. Like the basic skills, these can be enhanced in the process of teaching a content area if the instruction is well designed. The learning environment should simulate the worksite as closely as possible. Learning goals should be typical job tasks or problems found on the job. Teachers should encourage employees to work together and to listen and learn from each other. Again, the process should enable trainees to learn how to "do" something useful on the job: seek information from job-related print materials, write that information down in a useful form, discuss and analyze information with co-workers, produce a plan to accomplish a task or solve a problem, give oral or written reports.]

2.7 Recruiting Employees

Because of the stigma attached to illiteracy, most employees have been covering up their deficiencies for years. They will feel threatened and embarrassed if they are singled out because of their basic skills problem. So the most important element of recruitment should be sensitivity and respect for your potential learners. This is true whether participation is voluntary or mandatory. A few basic guidelines will help here:

- Assure employees that their jobs are not threatened and that the program is being offered because the company values them. Create as secure an atmosphere for learning as possible--by informing employees about program goals, the purpose of training, and expected outcomes. You want them to welcome the program and to see that they will gain something from it.
- Avoid methods, language, or attitudes which expose their problems needlessly. Even the name of your program can sometimes be important. So as not to stigmatize the employees it teaches, Literacy Action in Atlanta calls its course "New Age Learning" instead of remedial reading. Polaroid calls its basic skills program "Functional Skills Program."
- Observe confidentiality in employee schooling and achievement records. An atmosphere of mutual trust will produce better results.
- Provide concrete incentives for participation. Full or partial released-time is a commonly-given incentive. Without it many employees will not be able to participate because of other life demands on their time. The prospect of promotion can be a major incentive, but for this to be effective job openings will have to be posted, job requirements made clear, and everyone involved made fully aware of the policy. Convenience is a compelling reason for participation. On-site instruction will have far greater appeal because the employees will not have to spend time and money traveling to and from an external site. If instruction must be given off-site, fees and transportation costs covered by the company can be a powerful incentive. Your local library is one example of a neutral site that is not threatening to adult learners. (If you offer a general literacy program, you might consider opening enrollment to the family members of your employees, especially those with limited-English-speaking ability.)

A variety of recruitment techniques are possible. You will need to determine what is best for your company. Methods commonly used are: word of mouth through supervisors and co-workers; company-wide orientations for large groups of employees, followed by small-group discussion; posters and notices displayed in high-use areas of the company, such as cafeterias; articles in in-house newsletters; and letters sent to employees or notices included in their paychecks.

2.8 Testing and Screening

There is little consistency in screening practices used in current company programs. Some deliberately avoid pre-admission testing or specific entrance requirements, leaving it to the employees to figure out where they fit in. Others conduct personal interviews and basic skills evaluation to place employees in

appropriate levels of instruction and better determine their goals and needs. This issue should be discussed thoroughly with your educational partner. How you decide to handle this will be determined by such factors as your company size, the number of problem readers you think you have, the type of basic skills program you plan to offer, and characteristics of your workforce.

2.9 Keeping Records

An early duty of the planning team and program staff should be to decide on the kind of information that will have to be collected to support good program management and evaluation. The method of keeping records (paper files, computer) will have a bearing on the design and adaptation of forms that will be needed. Information gathered might cover such things as attendance, hours of instruction, pre- and post-skill test results, and employee educational background. Data not directly related to the program should not be included.

2.10 Selecting The Site For Classes

The more care taken to create an inviting and enriched learning environment, the more your employees will see the program as a management priority and the greater will be their motivation to learn. The planning team, educational provider, and plant manager or equivalent should together identify the program's space requirements. The following features characterize a good site:

- Permanence of Space. The instruction site should be comparable in permanence to the sites of other company training programs. This will show the high value the company places on basic skills. The more your program is seen as part of the company's overall training and education effort, the less likely beginners will feel stigmatized. Locating the site near space allocated to other training activities is often helpful.
- Attractiveness. The space should be just as appealing as the sites of other company training programs. Brightly painted walls decorated in an interesting way make a big difference.
- Safety and comfort. The space should be well lighted, away from distractions and noise, and secure.
- Adaptability. The space should provide adequate room for private study and for small and large group meetings and discussions. The number of employees taking part may change as the program expands or shrinks. Allowance will need to be made for that.
- Accessibility. The space should be convenient for employees to get to from their various job sites throughout the company. The more accessible the site is, the more inviting it will be to trainees who may wish to use materials or study on their own time.
- Flexibility. The site will need to be equipped with furniture that is appropriate for learning--including tables for grouping and shelves for materials, and partitions and movable walls if necessary. Storage and display space will be needed for instructional materials, audio-visual aids, work folders, equipment, books, and other items.

2.11 Providing Essential Support Services

The need for support services should be considered thoroughly in the initial planning. Many employees will have had negative learning experiences in the past and will be anxious about whether they can do well in the program you have set up for them. There are several things you can do to reassure them. Emphasize that the program is not patterned on a school-based approach. Be clear about the learning goals. Enable them to see that the goals are realistic and attainable. Make it possible for them to learn at their own pace and in a manner that fits their particular learning styles. Help with childcare arrangements and, if the program is not offered on company premises, with transportation. Where needed, provide one-to-one tutoring to enhance class performance. Offer counseling to help with personal problems and insecurities. Success in the basic skills program may motivate the employees to want further education, and they may need career counseling, information on other adult education programs available, and help in filling out applications for other programs. Responsibility for specific services should be assigned to your educational provider, company staff, or the union, as appropriate, and the availability of these services should be clearly communicated to the employees as part of their orientation to the program.

2.12 The Role of Evaluation

Plans for evaluating the effectiveness of your basic skills program should be established during the early planning phase. A good evaluation component will tell you if employee and company learning goals are being met. It will help you identify instructional and operational problems and provide an informed basis for taking corrective action. Equally important, it will provide evidence to later justify continued company expenditures for the program.

Just as the job provides the context for learning and instruction, so it serves as the main test of program effectiveness. If employees are better able to perform their particular jobs as a result of the program, then both trainee and company goals are being met. You will need to design forms, implement procedures, gather and analyze information, and indeed have a clear sense of what information to gather, to know whether learning goals are being met as the program progresses. Note that while standardized reading tests may be helpful in placing your employees at the right level of instruction, they are not the best measure of program success. What you most need to know is whether an employee can now read the safety signs in his or her work environment or a letter explaining new health benefits.

Apart from activities to evaluate the program quantitatively, attention should be given to whether there are observable changes in employee self-esteem, self-confidence, and ease of learning. Adults who lack good basic skills often have been made to feel they can't learn. Improvement in attitude and demeanor can be important signs of program success. Testimonials and other anecdotal data should be gathered from the trainees, their co-workers and supervisors, and program staff.

Evaluation and program monitoring activities are not the same thing. Evaluation will occur only periodically, perhaps every few months. Its purpose is to tell you whether job performance goals are being met. Monitoring will tell you whether various elements of program instruction and operation are working well from day to day. Monitoring activities will typically be carried out by program and company staff as a part of their ongoing responsibilities. Evaluation can be done by your educational provider if it has the needed expertise and a solid

understanding of the content and requirements of specific jobs. But better results often are obtained from an independent evaluation specialist hired specifically for this purpose. Suitable experts usually can be found through your local college, state department of education, or similar organization. Whatever route you take, the project coordinator and the program director should be actively involved. They will be most familiar with all aspects of the program.

It should be noted that the evaluation results will mean more if you build in a point of comparison. Lack of a control group is the main failing of research in workplace literacy. Because program participation is usually voluntary, there are generally individuals who need help but do not enroll. Some record of such people and their performance and job retention would provide a useful reference point. Comparative information on age, gender, schooling, length of employment, prior work experience, and other such variables, would also be useful. Your evaluation specialist could be called on to work out the details.

PART 3: SPECIAL ISSUES TO CONSIDER

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3.1 Scheduling Classes

Many adult basic skills programs have trouble retaining students. This is usually due to poorly-planned programs and a failure to understand the motivational needs of adult learners. In the business community, the programs that report the best attendance, retention, and achievement are those that: are specifically job-related, are taught by well-trained teachers, use appropriate curriculum and materials, and are offered on company time.

It is vital to remember that working adults who must attend classes on their own time are often under extraordinary pressure because of competing demands at home and in the community. So even if your company is thorough in every aspect of program development, if classes are not scheduled at times convenient to them, they are unlikely to stay in the program for long and you will not succeed in meeting your program goals.

It is sometimes hard for a company that operates with multiple shifts and extensive overtime to provide a program that is equally accessible to employees on all shifts. For example, at Hasbro, Inc., English-As-A-Second-Language courses must be stopped altogether during the company's busy season, which runs throughout the summer with employees often working 12-hour shifts, six days a week. Even when class times can be made more flexible, teachers there report that the employees are often too exhausted by their work schedules to attend classes.

There is no simple solution to this problem. What you can work out will depend on your particular circumstances. Clearly, to be effective, instruction must have both intensity and continuity. Yet your first priority is to see that production and service deadlines are met. Your planning team will need to weigh the scheduling possibilities with great care, reaching for solutions that will permit both instructional and production goals to be met. It will be helpful to get ideas from company personnel, key program staff, and others involved in planning and developing the basic skills program. It also would help to talk with other companies to see how they have dealt with this problem.

3.2 When Is A General Literacy Program Appropriate?

Employee skill needs are not confined to the job. If your internal assessment of employee need and job performance reveals only limited need for a basic skills program that is specifically job-oriented, you may wish to consider a general literacy program. Companies already doing so report considerable benefit as a

result of increased employee self-confidence, self-esteem, job satisfaction, job stability, and involvement in further educational activities to enhance personal growth. Such gains will make your employees more mobile, promotable, and valuable.

A general literacy program can take two broad forms:

It can teach the basic skills to enable individuals to function in specific tasks that are important to them in their everyday lives--reading a book to a child, reading well enough to get a driver's license, writing a letter, balancing a checkbook, reading labels on medicine bottles and consumer products. Or basic skills instruction can be provided as one element of a program in which the goal is to earn a high school diploma or equivalent. The latter may require a longer-term company investment, but this is likely to pay off in the long run.

A review of your company's personnel files will tell you whether significant numbers of your employees have had limited schooling, one of the best single indicators of need. As with a job-related basic skills program, you can elect to provide the instruction yourself, but it usually will be more feasible to contract with an outside educational provider. A key point to keep in mind is that if your priority goal is to improve performance in specific jobs, a general or high-school preparation program will not directly achieve that. (The subject matter studied to acquire a diploma or to function in everyday tasks of reading and writing has little or no relationship to specific competencies needed for specific jobs.) What it can do is broaden the employee's capacity to learn and to acquire new skills and understanding.

Illustrative Case 9: The Continuing Education Institute

Blue Cross/Blue Shield, The Bank of Boston, Data General, Digital Equipment Corporation, and Massachusetts General Hospital are among several Boston-area companies which contract with The Continuing Education Institute for high-school diploma work for their employees. In CEI's Adult Diploma Program, which is geared to working adults, the employees earn a standard high school diploma from a private high school in Boston. CEI and the high school together determined the educational requirements.

All courses are conducted on company premises after work hours. CEI provides a general orientation to company supervisors and potential students. The companies advertise the program among their employees, encouraging interested persons to sign up. Those who enroll are assessed in reading, writing, and math. They then meet with a counselor/mentor, called a diploma consultant, to discuss the assessment and jointly plan the program. Meetings with the diploma consultant occur throughout the duration of the program, with students receiving counseling and tutoring in the basic skills when necessary.

To earn a high school diploma, each student must prove 12th-grade level ability in reading, writing, math, U.S. history, and science. Classes in these subjects are given at company locations. Students also earn credit for skills and knowledge gained on the job, at home, and in community activities, if such learning can be demonstrated. Workshops are held to teach the students how to analyze such learning. Classes and workshops usually meet once a week for two hours at a time.

The prospect of earning a high school diploma is a strong incentive to the employees. Retention and graduation rates average over 70 percent. Companies pay for the courses and workshops through their regular tuition assistance programs. They consider the investment every bit as worthwhile as reimbursement for college

study. The companies report that employees who take part in the program have a significantly lower turnover rate and a much higher promotion rate than their counterparts who do not enroll. They also stress that it is cheaper to offer the program through CEI than it would be to offer a company-run program. The cost ranges from \$1,500 to \$2,400 per student depending on ability and educational need. Tuition charges are \$150 per course and \$300 per workshop per employee. The average time for graduation is 12.5 months.

3.3 The Role of Volunteers

Volunteers can play a valuable role in a job-related basic skills program. In general, they will not have the expertise to do your needs assessment, develop job-related curriculum, or conduct evaluation. And they should seldom be the sole source of instruction. But, if properly supervised and trained, volunteers can supplement the instruction given by your fully-trained teachers and provide the individualized attention that many employees will need. They can bring creativity, ingenuity, and personal warmth to the teaching and learning situation. They can inspire trust in those who suffer from low self-esteem and self-confidence. They are especially effective with beginning readers who need the support of a one-to-one caring relationship.

If your company already operates a community affairs program, a member of that staff may be able to help with recruiting volunteers. But your program director and/or the educational organization charged with operating your program should have primary responsibility for handling this task, for four reasons: they know what volunteer organizations exist in your community; they are best able to judge whether it makes sense to use volunteers in your particular situation; they can better assess the additional supervisory and support services that would be needed; and they can best determine if it will be cost effective.

In considering the role of volunteers, you may wonder whether your own employees should tutor their fellow employees. In some situations, this may be appropriate. In others, it may not be. If you feel that your skill-deficient workers will be embarrassed to admit their problem to their co-workers, peer tutoring probably should be avoided. But employee volunteers are often an excellent source of support for limited-English-speaking employees (see section 3.4 below). And some company programs, notably those run by unions, report good results with peer teaching arrangements--especially when the trainer and the trainee work in the same kind of job. In some cases, the employee tutor might be able to contribute to actual curriculum development. Another variation on this idea is to team the potential employee tutor with a trained teacher. Such an arrangement might be worth considering if your company is not able to assemble an adequate teaching staff from outside.

3.4 Limited-English-Speaking Employees

Recent research confirms that new immigrants and indigenous minority groups will make up a growing part of the labor force in the years to come (see BCEI's January 1987 Newsletter). Indeed, health, food, and other service industries already depend heavily on these population groups, and entry-level jobs throughout business and industry now are filled by substantial numbers of such people. Many have poor basic skills. But they are doubly handicapped because they also lack the ability to adequately speak and understand English or to understand the "culture" of the environments in which they live and work.

Recent immigrants also often have numerous practical "survival" problems--obtaining housing and clothing...figuring out how to use public transportation...enrolling children in school. The social adjustment stresses they experience in dealing with activities that most Americans take for granted are considerable. Many suffer severe psychological distress stemming from their lives back home or the circumstances of their departure. These stresses are further compounded as they seek and try to hold down jobs in a working context that is also foreign to their experience.

If a major goal of your basic skill effort is to help limited-English-speaking employees, English itself will have to be taught in addition to reading and writing. Even then, your limited-English speakers are not likely to get very far in a combined basic skills/ESL program unless you are first prepared to help them develop the speaking and listening skills that are a prerequisite for learning to read and write. It is important to understand that without adequate listening and speaking skills these employees can't ask questions of their supervisors (or instructors) or fully understand instructions. You will want to make sure your planning team and your educational provider take these special needs into account. Unless your educational partner specializes in services for limited-English-speaking adults, it is advisable to seek advice from individuals or groups that do.

Additional curriculum and activities will have to be developed to serve these employees. Talking about the tools and equipment of their jobs will help strengthen their functioning and their language ability in that area. Luncheon chatter with co-workers will help develop language for social interaction. Discussing grievance and other company procedures, or accepted codes of dress and eating, will help build their understanding of those important areas of working life. The exact areas of need will differ depending on the employees' countries of origin and the make-up of your company. The important thing is to clearly identify the needs during your initial assessment and to develop specific plans to address them.

In general, there is less stigma attached to the language and basic skills problems of refugees and immigrants. Thus, an experienced native employee can often provide an invaluable service to the company and to the limited-English employee by functioning as a mentor and tutor. This volunteer mentor can help orient the limited-English employee to the conditions and demands of the workplace and introduce a greater human element into the learner's working environment. This can help overcome the sense of isolation that limited-English speakers so often feel. Again, employees should seldom be the only source of orientation and instruction, but they can play a highly significant role.

Illustrative Case 10: Aetna Life and Casualty

Aetna Life and Casualty in Connecticut has used volunteer employees in this capacity since 1979 when its ESL program for foreign-born employees was established (in cooperation with Literacy Volunteers of Hartford). An instructor from the Management and Skills Department of the Aetna Institute (the company's center for corporate education) is in charge of the program. Employee tutors were originally recruited through the company newsletter, but recruitment is now largely by word of mouth. Tutors are trained by Literacy Volunteers, which asks for a minimum one-year commitment. They work with one or two student employees twice a week for an hour at a time, usually during lunch hour or at the end of the day. Half of their tutoring occurs on released time; the other half is donated.

Tutoring takes place in a site convenient to both employees, and a small library of reading material is available. Aetna had no problems drawing their limited-English-speaking employees into the program because most heard about it through the company grapevine. There has always been a waiting list for admission. At its height, the program had 30 couples working together. The program coordinator notes that both students and tutors benefit from the tutorial relationship. Some students have become U.S. citizens with help from their fellow employees. Every year the company gives a luncheon to honor both groups of employees.

Illustrative Case 11: Control Data Corporation

Control Data sponsored a job-related ESL program to improve the communication skills of non-native employees. The company's ten-week pilot took place at the large manufacturing division at Arden Hills, Minnesota. Control Data worked in partnership with three local ESL providing organizations and with Literacy '85, a technical assistance organization, which coordinated the project. This effort is an excellent example of the process required to plan an effective on-site job-related basic skills program (and is discussed in detail in Appendix B).

3.5 Small Businesses

The U.S. Small Business Administration defines a small business as an employer with fewer than 500 employees. According to the SBA, small businesses in the U.S. employ some 50 percent of the private-sector workforce and provide about 67 percent of all initial job opportunities and training in basic skills. Because small businesses are more likely to hire entry-level workers, they are disproportionately affected by the low skill levels of their employees and future employees. Very small businesses may not have the resources to undertake the kind of planning detailed in this Bulletin, or to set up a company program. Yet their very survival may well depend on whether they can provide basic skills to their employees.

In general, small businesses probably will have to turn to technical assistance and/or educational-providing organizations in their communities to identify suitable programs for their employees. Many of the organizations have been publicly funded to give such help. Thus, because small businesses will probably not have the resources to do more, their main service to their employees will be to gather the information needed to make referrals. Where possible, incentives for participation should be considered. As in larger companies, the basic literacy requirements of jobs actually performed should be understood for effective job-related basic skills instruction to be given. Unlike larger employers, the planning and assessment activities needed to make good program referrals will have to be done by external organizations equipped to provide that help.

Unless the employer is already aware of literacy education or planning groups in the community, the best starting point will probably be technical assistance groups specifically set up to help small businesses--e.g. incubator programs, and regional or local branches of such groups as the National Federation of Independent Business, the American Society for Training and Development, the Small Business Legislative Council, the U.S. Small Business Administration, and the National Alliance of Business. [Note: The National Alliance of Business, through its regional branches, is one of the best single sources for identifying private industry councils, which operate under various names at the local level.] Some of these organizations are working now to build small business awareness of adult

illiteracy and its effect on their operations. And many are trying to build their own capacity to provide services and help establish linkages to educational-providing groups.

When assessing resources available in the community, it should be kept in mind that larger companies may have job-related basic skills programs in place already and some may be able to provide services to small businesses.

3.6 Very Big Businesses

In very big businesses, which may have dozens of plants around the country, it may not be feasible for every local facility to directly handle every aspect of planning and development. Most very large companies maintain huge educational resource and development centers which can and do provide analysis and curriculum development support for their local plants. In such cases, it will be important to determine which elements of program planning and development can best be done centrally and which locally. In industries where the same jobs and groups of jobs exist in all plant locales, certain aspects of curriculum development can probably be done more efficiently at the central location, with wrap-around materials developed locally as needed. Job analysis tasks, to the extent that the same jobs are being analyzed, might be done most productively from the central location. Assessing employees' job performance and skills, however, will almost certainly have to be done locally.

3.7 The Role of Unions

Union representation on the company's planning team can be immensely valuable. Unions have a historical commitment to education. Many already are heavily involved in providing basic skills services, sometimes as a partner with management, sometimes by directly initiating and running programs themselves. In very large industries, such as automaking, unions often have major financial backing for educational activities. Most see the provision of educational benefits for their members as a key area for contract negotiation.

Unions can play a key role in your efforts to recruit employees. Because they are trusted by their members, their endorsement of your program will help convince your potential trainees that it is a good thing. And union publications are an excellent vehicle for promoting programs and giving employees information about program activities, goals, and procedures. Many unions also are experienced in developing job-specific basic skills curricula. This could be an important resource in your effort to analyze the basic skills requirements of jobs and in later designing an effective program.

Illustrative Case 12: Consortium for Worker Literacy

A consortium of eight unions in New York City operates a major adult basic skills program known as the Consortium for Worker Literacy Program. With \$2 million in public and foundation funding, classes were begun last fall and are available at no charge to members and their spouses and adult dependents. Some 4,300 union and family members are currently enrolled. The Consortium was responsible for managing the program and curriculum design and for hiring its own teachers. Classes are offered at 65 sites around the City--in community centers, housing projects,

schools, worksite classrooms, churches, and union halls. The Worker Literacy Project of the City University of New York provides ongoing help with staff development, curriculum, evaluation, and research.

Illustrative Case 13: The UAW, GM, Ford, and Chrysler

In 1984 the UAW negotiated agreements with both General Motors and Ford to establish basic skills programs. More than \$200 million a year was made available at General Motors and some \$120 million over three years at Ford. The programs cover all forms of adult education, including language training and remedial reading. Chrysler began to consider basic skills programming in 1985-86, and has allocated substantial funds to its effort.

At the local level, each company's program is governed by a joint body consisting of 2-3 UAW officials and 3 company representatives. This group has overall responsibility for deciding how and what basic skills instruction should be given and how it should fit into the overall education and health program.

Illustrative Case 14: Massachusetts Workplace Education Initiative

The Massachusetts Workplace Education Initiative is sponsored by the Executive Office of Economic Affairs, the Executive Office of Labor, and the Department of Education. The Initiative funds several model workplace literacy projects involving partnerships between unions, employers, education providers, and state administrative entities.

Local 26 of the Hotel and Restaurant Employees Union in Boston tried to include English-as-a-Second Language and English language literacy in collective bargaining negotiations with several large hotels. When the effort was unsuccessful, the union sought and got public funding for a program of its own. Many of its members are newcomers from non-English-speaking cultures--Haiti, Puerto Rico, El Salvador, Cambodia--and English language skills are needed to move from "back-of-the-house" to more highly-paid "front-of-the-house" jobs. The need for the program was demonstrated when registration began: Two hundred workers competed for the 45 funded slots, in classes meeting three times a week at the union hall.

Recruitment efforts were met by an equally strong demand in New Bedford. Three union locals are working with the Labor Education Center at Southeastern Massachusetts University to develop a program to serve the educational needs of their members. Business agents in each union have played a critical role in negotiating the sites and scheduling of classes. Shop stewards have used their familiarity with workers' lives to encourage participation, helping potential learners overcome their fears and embarrassment and find solutions to practical impediments to participation.

Peer language coaches, recruited from the union membership, provide ongoing support in the New Bedford Program. While their stated purpose is to offer limited-English learners an opportunity to practice at lunch and on the job, the coaches actually speed up the process of learning English and help promote increases in self-esteem and program retention. A culture supportive of literacy and continuing education is being built within the entire union membership.

The International Ladies Garment Workers Union operates a program with the management of T.J. Maxx, a subsidiary of Newton Buying Corporation located in Worcester. This project started as a collaboration between labor, management, and a local community college. Management and labor both sit on the project advisory

committee, which established the program philosophy and hired the program coordinator, and both sides are accountable for making the program work. The union provides material for curriculum development and assists in student recruitment and support. Management has given teachers access to the shop floor so that they are exposed to authentic worksite language needs and can directly encourage line supervisors to support the program. The program coordinator regularly attends the weekly meetings of supervisors. And department production quotas have been adjusted to permit personnel to attend classes on released time.

3.8 Computers: A Possible Role But Not A Panacea

Computers hold great potential as a supplemental aid for basic skills instruction. Many promising projects are underway to develop this potential. But because the field is still in such an early stage of development, companies should resist the urge to automatically see computers as a main vehicle for job-related basic skills instruction. Whether computers can be used effectively depends heavily on whether adequate software exists or can be developed at reasonable cost to serve specific needs within specific companies. At the present time there is a paucity of effective computer software for even general basic skills programs. Moreover, computer courseware development is expensive and takes time and special training. As part of your company's overall planning, you may wish to consider the role of computers, but you should identify and fully consider the limitations and possible pitfalls. It will help tremendously to actually visit a few computer-assisted programs to view their operations firsthand.

3.9 Setting Realistic Expectations

Whether a program is job-related or general in nature, it will not succeed if unrealistic expectations are set. There are no quick fixes. Planning needs to be comprehensive and involve the right players. But it also will take time, from a few months to a year or more, if it is to be effective. It is important to recognize this at the outset.

It is just as important to realize that learning goals will not be met in a few weeks or months. Thus, during the planning phase, it will be essential to discuss with your educational partner exactly what your program will accomplish and in what time frame. The field abounds with company efforts that have problems because they expect too much (or too little) of their programs and have not addressed this issue with their educational partners. A ten-week English-As-A-Second-Language course for limited-English speakers, for example, will not solve their communication problems or teach them all they need to know about the workplace. Nor will these employees become fluent speakers in that time period. But it should produce a significant gain in their interactions with co-workers and supervisors and begin to improve their self-confidence and self-esteem.

The greater your commitment to a long-term investment, and the more you can accept small incremental gains as evidence that certain legitimate goals are being met, the more likely your program will succeed. Also keep in mind that literacy improvement time varies significantly depending on program goals. Military and civilian data suggest that 100 hours of engaged time are needed on average to make one year's gain in reading grade level. The best programs can cut this time in half. A focus on the literacy requirements of a job rather than general literacy can cut the 100-hour average by as much as two-thirds.

Finally, because visible and ongoing support from top management is a key ingredient for success, every effort should be made to develop and maintain clear communications and expectations at that level. Failure to do so may lead to termination of your program before it has had a chance to demonstrate results.

3.10 Should You Start With a Pilot Program?

Starting your program on a pilot basis could be extremely advantageous. It can provide an opportunity to work out unexpected bugs and to gain firsthand knowledge about all aspects of program operation, including costs. It can give you a graceful way to change educational partners if this relationship has not worked to your satisfaction. In cases where upper management may doubt the program is needed or will produce beneficial results, a well-designed and carefully-evaluated pilot can produce information vital to the case for a longer-term commitment.

APPENDIX A: CONTACTS & BACKGROUND READING

A.1 Contacts for Advice & Referral

The following individuals and organizations may be able to provide advice and referrals in one or more areas of program planning, development, and operation (see code below). Please note that the listing is not meant to be all-inclusive, but to provide a starting point.

Code: Areas of Expertise

- 1 Program planning and development
- 2 Job analysis
- 3 Job-related curriculum development
- 4 Curriculum for limited-English speakers
- 5 Assessment and evaluation
- 6 Using computers for skills training
- 7 Using volunteers
- 8 Operation of job-related basic skills programs
- 9 General technical assistance
- 10 Reading and writing development, general
- 11 Operation of general literacy/high school diploma programs
- 12 Union programs

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Independent Business

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Chamber of Commerce of the U.S.

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National Association of Manufacturers

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National Association of Private

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National Job Training

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A.2 Background Reading

The materials listed below may be of help in your company's planning and development work. Note that some are available at charge. Where known the costs are indicated.

A.2.a General Resources

Adult Literacy Education: Current and Future Directions, Arlene Fingeret, 1985. ERIC Clearinghouse on Adult, Career, and Vocational Education, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210. (\$5.50)

Adult Illiteracy in the United States: A Report to the Ford Foundation, Carman St. John Hunter and David Harman, 1985 Reprint. McGraw-Hill Book Company, Order Services-Consumer Group, Princeton Road, Hightstown, NJ 08520. (\$8.95)

Becoming a Nation of Readers: The Report of the Commission on Reading, 1984. The National Institute of Education, U.S. Department of Education, 1200 19th Street, N.W., Washington, DC 20008.

Conference on Adult Literacy and Computers, A Report on the Proceedings of a National Invitational Conference, sponsored by the Gannett Foundation, November 1985. Technology for Literacy Center, 580 University Avenue, St. Paul, MN 55103.

"The Context of Literacy in Our Society," Jerome Harste and Larry Mikulecky, Becoming Readers in a Complex Society: 83rd Yearbook of the National Society for the Study of Education, Part I, 1984. University of Chicago Press, 5801 Ellis Avenue, 3rd Floor S, Chicago, IL 60637.

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Effective Adult Literacy Programs: A Practitioner's Guide, Renee Lerche (ed.), Cambridge Publishing Company, 888 Seventh Avenue, New York, NY 10106, 1985. (\$24.95)

Effective Approaches to Teaching Basic Skills to Adults: A Research Synthesis, Gordon G. Darkenwald, Office of Educational Research and Improvement, U.S. Department of Education, 555 New Jersey Avenue, N.W., Washington, DC 20208, 1986.

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Essential Characteristics of Effective Adult Literacy Programs: A Review and Analysis of the Research, Miriam Balmuth, The Adult Beginning Reader Project, New York State Education Department, Bureau of Adult and Continuing Education Program Development, 99 Washington Avenue, Albany, NY 12234, February 1987.

Guidelines for Effective Adult Literacy Programs, Steven E. Mayer, B. Dalton Bookseller, 7505 Metro Boulevard, Minneapolis, MN 55435, 1984.

"Is A Common Definition of Adult Literacy Possible?," Ronald M. Cervero, Adult Education Quarterly, Vol. 36, No. 1, Fall 1985.

Learning to Work: Improving Youth Employability, Paula Duggan and Jacqueline Mazza, Northeast-Midwest Institute, The Center for Regional Policy, 218 D Street, S.E., Washington, DC 20003, 1986.

LITERACY: Profiles of America's Young Adults, Irwin Kirsch and Ann Jungeblut, National Assessment of Educational Progress, Educational Testing Service, Rosedale Road, Princeton, NJ 08541, 1986. (\$14.00)

Reading Comprehension From Research to Practice, Judith Orasanu (ed.), The U.S. Army Research Institute for the Behavioral and Social Sciences. Lawrence Erlbaum Associates, 365 Broadway, Hillsdale, NJ 07652, 1986. (\$14.95 paperback)

Technology and Structural Unemployment: Reemploying Displaced Adults, Office of Technology Assessment, U.S. Congress, 1986. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Toward A Literate Society: A Report from the National Academy of Education, John B. Carroll and Jeanne S. Chall (eds.), 1985. McGraw-Hill Book Company, Order Services, Manchester Road, Manchester, MO 63011. (\$26.95)

Turning Illiteracy Around: An Agenda for National Action, David Harman, Working Paper No. 2, Business Council for Effective Literacy, 1221 Avenue of the Americas, New York, NY 10020, May 1985. (\$5.00)

A.2.b Employee Basic Skills & Workplace Literacy

A Model Approach to Language and Literacy Needs in the Workplace (including a curriculum guide). Kevin O'Neill, Greta Ploetz, and Margaret Wilke, June 1986. Available from Greta Ploetz, 3216 Gettysburg North, Minneapolis, MN 55427.

A Study of Attitudes Associated with Retraining, Broadcasting Industry Productivity Council, National Association of Broadcasters, 1771 N Street, N.W., Washington, DC 20036, March 1987.

Basic Skills and Employment and Training Programs: A Monograph for Local Elected Officials and Private Industry Council Members. Lori Strumpf, Center for Remediation Design, 810 18th Street, N.W., Suite 705, Washington, DC 20006.

Basic Skills Needs in Business & Industry: Employers' Perceptions, Implications for Literacy Services, Mary Winterbauer, Greta Ploetz (ed.), May 1985. Available from Greta Ploetz, 3216 Gettysburg North, Minneapolis, MN 55427.

Basic Skills in the U.S. Workforce: The Contrasting Perceptions of Business, Labor, and Public Education, J.F. Henry and S.V. Raymond, Center for Public Resources, 680 Fifth Avenue, New York, NY 10019, February 1980.

"Building Intellectual Capital: The Role of Education in Industry," Rosalyn E. Stoker, Yearbook of Adult and Continuing Education, 1980-81, Sixth Edition. Marquis Academic Media, Marquis Who's Who, Inc., 200 East Ohio Street, Chicago, IL 60611.

Cast-Off Youth: Policy and Training Methods From the Military Experience, Thomas G. Sticht, Applied Behavioral and Cognitive Sciences, Inc., P.O. Box 6640, San Diego, CA 92106, 1986.

"Corporations Take Aim at Illiteracy," Irwin Ross, Fortune Magazine, September 1986.

Development of a Handbook for the Establishment of On-Site Literacy Programs in Business and Industry, Peter A. Waite, doctoral dissertation, 1984. Available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, MI 48106.

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Employee Educational Programs: Implications for Industry and Higher Education, Susan W. Morse, ASHE-ERIC Higher Education Report No. 7, 1984. Available from Association for Study of Higher Education, One Dupont Circle, Suite 630, Washington, DC 20036.

Employee Training: Its Changing Role and An Analysis of New Data, Anthony P. Carnevale and Harold Goldstein, American Society for Training and Development, 1630 Duke Street, Box 1443, Alexandria, VA 22313, 1983.

ESL For Action: Problem Posing at Work, Elsa Roberts Auerbach and Nina Wallerstein, 1987. Addison-Wesley Publishing Company, Jacob Way, Reading, MA 01867.

From the Classroom to the Workplace: Teaching ESL to Adults, Harcourt, Brace, Jovanovich, Inc. and the Center for Applied Linguistics, 1983. Available from Prentice-Hall, Order Department, 200 Old Tappan Road, Old Tappan, NJ 07675.

Functional Context Education: Workshop Resource Notebook, Thomas G. Sticht, Applied Behavioral and Cognitive Sciences, Inc., P.O. Box 6640, San Diego, CA 92106, March 1987.

Functional Literacy and the Workplace, Proceedings of a National Invitational Conference, Education Series, American Council of Life Insurance, 1850 K Street, N.W., Washington, DC 20006.

Handbook for the Development of a Cooperative Adult Basic Education Program in Industry, Mimi Edge Felton, Adult & Continuing Education, Department of Education, Commonwealth of Virginia, 1979. Available from ABE Resource Center, Virginia Commonwealth University, 1015 West Main Street, Richmond, VA 23280. (\$5.00)

Handbook for Trade-Related Curriculum Development in a Cooperative Adult Basic Education Program in Industry, Mimi Edge Felton, Adult & Continuing Education, Department of Education, Commonwealth of Virginia, 1981. Available from ABE Resource Center, Virginia Commonwealth University, 1015 West Main Street, Richmond, VA 23280. (\$5.00)

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"Industry-based programs: A growing source for adult literacy development," Ernest L. Fields, Lifelong Learning, Vol. 10, No. 1, 1986.

"The Influence of Metacognitive Aspects of Literacy on Job Performance of Electronics Technicians," Larry Mikulecky and Jeanne Ehlinger, Journal of Reading Behavior, Vol. XVIII, No. 1, 1986.

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"Job literacy: The relationship between school preparation and workplace actuality," Larry Mikulecky, Reading Research Quarterly, No. 3, 1982.

Job-Related Basic Skills: Cases and Conclusions, Larry Mikulecky and Thomas G. Sticht, 1984. ERIC Clearinghouse on Adult, Career, and Vocational Education, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210.

Job Skills and Basic Skills: Training "Mid-Level Literates" for Work with New Technologies, Thomas G. Sticht, Work In America Institute, 700 White Plains Road, Scarsdale, NY 10583. (\$15.00)

Literacy at Work: Developing Adult Skills for Employment, Paula Duggan, Northeast-Midwest Institute, The Center for Regional Policy, 218 D Street, S.E., Washington DC 20003, 1985. (\$7.00)

The Literacy-Employment Equation, Education for Tomorrow's Jobs, Erik Payne and Andrew Hahn with James Darr, A Policy Options Monograph, Far West Laboratory for Educational Research and The Network, Inc., 1985. Available from Far West Laboratory, 1855 Folsom Street, San Francisco, CA 94103. (LL85-04, \$3.00)

Literacy in Context: The Nature and Role of Literacy in a Job Training Program for Watchmakers, Emily K. Filardo, paper presented at Conference on Language and Adult Literacy, Linking Theory and Practice, Graduate School and University Center, City University of New York. Write to Emily Filardo, 215 West 91st Street, New York, NY 10024.

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APPENDIX B: AN EXEMPLARY MODEL: CONTROL DATA CORPORATION

Control Data, the Minnesota computer services and manufacturing company, sponsored a job-related English-As-A-Second-Language Program to improve the communications skills of non-native employees. The company's 10-week pilot took place at the large manufacturing division at Arden Hills. Control Data worked through Literacy '85 with three local ESL providing organizations. Literacy '85, a technical assistance organization, not only coordinated the project but brought vital expertise to both program development and implementation, thereby assuring that company goals for the program were met. Moreover, Literacy '85 was able to negotiate a program agreement with Control Data with direct understanding of how to operate in a "business culture." Control Data's approach is an excellent example of the process required to plan and implement a good on-site, job-related basic skills program, and to evaluate it.

Creating the Planning Team. A preliminary meeting was held between a program specialist from Literacy '85 and a personnel specialist from Control Data. Subsequent meetings included the company personnel manager, the training and development coordinator from the Arden Hills plant, and an ESL consultant from Literacy '85. Initial discussions centered on the skills needs of Asian employees at the plant and how the cooperating partners could work together to meet those needs.

Needs Assessment. The needs assessment proceeded in stages. Before submitting a program plan to upper management for approval, the personnel department surveyed all section managers to get their perceptions of the needs of their foreign-born workers. Literacy '85 supplied an "Employer's Checklist" for this purpose.

In the next stage of needs assessment, the parties had to define more precisely the communications problems of the ESL employees and determine which they should seek to remedy first. These priorities were used to shape instructional goals.

The third part of the needs assessment, which took two and one-half days to complete, assessed employee skills levels and provided an estimate of how many immigrant employees were likely to participate in the program. A pre-assessment questionnaire was administered to collect information on ethnic background, educational experience, and the like. Two standardized tests were given to assess oral language and reading ability. Informal oral interviews were conducted with the employees. Section managers explained the purpose of assessment to the employees as they distributed the questionnaire. During the informal interview, staff explained the proposed ESL program to employees to motivate them and allay any anxieties.

Setting Goals. About three months later, Literacy '85 submitted a report to Control Data which included the assessment results and a proposed plan for developing the instructional program. The study contained a description of five skills levels found among the employees, the typical skills needs of each level, and the teaching approaches recommended to meet those needs. About two months after receiving the report, Control Data management approved a plan for a pilot project to serve 60 immigrant employees at four different skills levels.

Selecting the Provider. Literacy '85 had about 10 weeks to recruit ESL providers from the community and to work with them on selecting and training teachers, designing the job-related curriculum, and making on-site arrangements for the classes. The three provider organizations chosen were the St. Paul Adult Basic Continuing Education Program, the 916 Area Vocational Technical Institute, and the International Institute of Minnesota. These organizations were to pool their expertise, with each given responsibility for staffing and curriculum development at one of the skills levels.

Staffing. Literacy '85's consultant served as the on-site coordinator and supervised the teaching staff. Each educational provider selected teachers experienced in job-related ESL instruction and curriculum development. Literacy '85 oriented them to program goals, the job context, and the instructional approach that would be used. Literacy '85 also trained them how to design a workplace curriculum on the basis of skills deficiencies revealed in the needs assessment. After the teachers were oriented, they met with plant supervisors and training personnel, observed employees on the job, and collected materials being used on the job. They were then able to prepare instructional goals for developing specific job-related skills, and these were submitted to Control Data staff for review and approval.

Curriculum. The communications skills needs of the immigrant employees differed by job function, depending on whether the employee was in a production, technical, or professional position. Keeping in mind the job performance results desired by Control Data, the teaching staff developed learning goals in four instructional areas, each with its own specific set of articulated development needs and learning objectives. The particulars in one instructional area are summarized below:

Instructional area. To improve oral communications with supervisors and co-workers in the context of particular work-related topics (tools, safety, materials, procedures, chemicals, production problems):

- . Language development need: Ask more questions about work instructions.
- . Competency goal: The employee should be able to ask for clarification of work instructions when they are not understood.
- . Learning objectives: The learner should be able to: a) show a clear understanding of verbal instructions through eye-contact, nodding, or saying "yes" or "no" to the question "do you understand?"; (b) use "yes" and "no" and ask "why" questions with proper grammar and intonation; (c) pronounce intelligibly technical words and jargon needed for the job; (d) ask for instructions to be repeated or clarified; (e) interrupt oral instructions without giving offense, by using "excuse me" or "would you please..."; and (f) recognize the negative result of not asking questions when instructions are not understood.

Recruitment. In the pilot phase, employees were recruited during the needs assessment. The general manager of the plant addressed all the immigrant employees in a special session. He explained the goals of the company and why foreign-born employees would need more proficiency in English to make a contribution to the company's future. (This personal "intervention" had a considerable impact on the employees.) In addition, education and training program staff met with individual managers to encourage them to refer employees.

Support services. No support services were provided during the pilot. Afterwards, however, Control Data created a new staff position, that of immigrant advocate. This individual serves as an intermediary between the limited-English employees and their supervisors. She recruits immigrant learners to the program and offers counseling if they have difficulties. She also helps managers to understand that certain instances of inappropriate or unacceptable employee behavior can result from cultural differences. She encourages managers to refer their employees to the ESL program and to stay involved in their study activities so as to sustain employee motivation. At the same time, she tries to keep supervisor expectations realistic.

Management support. To ensure the success and effectiveness of the project, the partners agreed that management at all levels should be involved. Upper management had demonstrated their support to line managers with meetings and written memoranda. Literacy '85 followed up with an orientation workshop on the purpose and methods of the program for these managers as well as the plant manager and the personnel department. Later, Literacy '85 prepared material for section managers describing the skills levels of their immigrant employees, how the program was structured to focus on the deficiencies, and how improving these skills could be demonstrated in on-the-job performance.

Evaluation. The pilot program ran for ten weeks. Each class met two times a week for two hours of instruction. Fifty-four employees finished the cycle out of the eighty who signed up. The evaluation included both an informal and a formal component. Informal assessment consisted of weekly monitoring of the program by the coordinator and periodic reviews by the Literacy '85 director and program specialist. To formally document the progress of learners, information was obtained from:

- . an employee self-assessment and program assessment;
- . line managers' assessment of the program and its impact on employee communication performance on the job;
- . results of pre- and post-tests designed by teachers;
- . attendance records;
- . coordinator's observations of classes and discussions with teachers and employees;
- . teachers' assessment of individuals and their progress in class; and
- . interviews with a sampling of the participants.

A number of problems were revealed during the evaluation. Of particular concern was the attrition rate, about 30 percent. The staff attributed this to the fact that little attention was paid to the problems employees faced in attending class on their own time. They also found that two hours of instruction after a full day's work was too much for most of the employees. Thus, for the project which followed the pilot, staff devised more flexible shift arrangements and shortened the instruction time.

A major recommendation to come from the evaluation was to continue the program to allow for long-term skill improvement. Another recommendation, from both the plant manager and the provider organizations, was that the instructional program be better integrated into the internal operations of the plant, with more communication between teachers and supervisors. It is noteworthy that nine of ten managers and nearly all of the employees recommended continuation of the program. Moreover, nearly all of the employees felt that their job performance had improved as a result of the skills upgrading.

Cost. Control Data estimates that the pilot program cost them one-third to half of a typical in-house business-related education course for managerial or technical staff.

Fine-Tuning. Following the pilot, a nine-month program was approved. As classes evolved over the next several months, the staff continued to make adjustments. The class cycle was shortened from ten to six weeks. The course content focused more and more on very specific areas of communication skill need. Production, technical, and professional employees were put into separate classes.

Early in 1986, a program was initiated for immigrant employees with immediate needs resulting from workplace changes. Employees who had previously worked at individual work stations were assigned to team-production groups. The job content did not change, but the new context required increased language communication skills so that the employees could function well as team members. Company personnel felt this problem sufficiently urgent to warrant holding classes on company time.

[A comprehensive review of the entire program was conducted in late 1986. Plans were begun for an expanded effort in both literacy awareness and in-house training opportunities for all employees (not just those with ESL needs). Because of the downturn in the computer manufacturing business climate, further activity has been put on hold for the present. But senior management remains concerned about the literacy issue and retains it on their long-term agenda.]

The Business Council for Effective Literacy is a publicly-supported foundation established primarily to foster greater corporate awareness of adult illiteracy and to work with businesses wishing to becoming involved in the literacy field. BCEL serves as a catalyst between the business and literacy communities and also concerns itself with state and national public policy development. BCEL's work is carried out largely through a varied publications and technical assistance program.

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